

Guardrail/Common Sensor (GR/CS)



MISSION

Provide signals intercept and precision target location of threat communications and noncommunications electronic emitters.

DESCRIPTION AND SPECIFICATIONS

The Guardrail/Common Sensor (GR/CS) is a corps-level, fixed-wing airborne signals intelligence (SIGINT) collection and target location system. The GR/CS system supports corps, division, and joint land force component commanders by detecting, identifying, exploiting, and precisely locating threat communications, radars, and other electronic emitters throughout the corps area of interest. It provides information dominance to the tactical commander.

One GR/CS system is authorized per aerial exploitation battalion in the military intelligence brigade at each corps. A standard system consists of six to twelve RC-12 aircraft that fly operational missions in sets of two or three. Ground processing is conducted in the integrated processing facility (IPF). Interoperable data links provide microwave connectivity between the aircraft and the IPF. The GR/CS provides near real-time SIGINT and targeting information to tactical commanders throughout the corps area via the Joint Tactical Terminal. Key features include:

- Integrated communications intelligence (COMINT) and electronic intelligence (ELINT) collection and reporting
- Enhanced signal classification and recognition
- Near-real-time direction finding
- Precision emitter location
- Advanced integrated aircraft cockpit

Planned product improvements include greater mobility and deployability via smaller “mini-” IPFs and system upgrades to increase GR/CS capability to exploit a wider range of signals. The GR/CS shares technology with the Airborne Reconnaissance Low and other joint systems.

FOREIGN COUNTERPART

Numerous countries possess airborne electronic warfare systems, but none achieve the direction-finding accuracy of the Guardrail system.

FOREIGN MILITARY SALES

None

PROGRAM STATUS

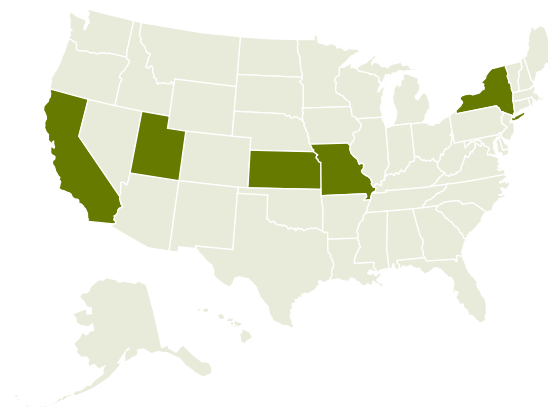
- Field interoperable subsystems to GR/CS Systems 1, 2, and 4.
- Complete ground relay facility development and fielding to GR/CS System 3 in Korea.
- Install dual use applications program into System 1 at the 224th MI Battalion.

PROJECTED ACTIVITIES

- Complete and field Tactical Information Broadcasting System (TIBS) upgrades to GR/CS systems 1, 3, and 4.
- Complete Air Force interoperability upgrade to GR/CS Systems 1, 3, and 4.
- Initiate reporting upgrade fielding.
- Begin mini-IPF engineering design.
- Field GR/CS System 2.
- Field System 4 remote relay capability.

PRIME CONTRACTORS

Raytheon (Wichita, KS); TRW (Sunnyvale, CA); Systems and Electronics (St. Louis, MO); L3Communications (Salt Lake City, UT); Lockheed Martin (Owego, NY)



* See appendix for list of subcontractors

